REMARKS

The present amendment is submitted in response to the Office Action dated July 5, 2006, which set a three-month period for response. Filed herewith is a Request for a One-month Extension of Time, making this amendment due by November 5, 2006, a Sunday, or by Monday, November 6, 2006.

Claims 1-12 are pending in this application.

In the Office Action, claims 1-12 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claims 1 and 4-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art ("AAPA"). Claims 2 and 3 were rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA in view of U.S. Patent No. 4,857,080 to Baker et al. Claims 11 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of U.S. Patent No. 6,893,755 to Leboe et al.

Turning first to the rejection of claims 1-12 for lack of enablement, the Applicants respectfully disagree with the basis for this rejection. Attached hereto as Appendix A is an internet screenshot showing a hydrogen-separating membrane used in the synthesis of ammonia. This membrane is a polyaramide membrane. Therefore, one skilled in the art would know and recognize polymeric or plastic materials that could act as hydrogen membranes. The Applicants therefore respectfully submit that the claims are properly enabled under Section 112, first paragraph.

Looking now at the substantive rejections of the claims, claim 1 has been amended to add in the last paragraph that "the molecular hydrogen diffuses through the plastic membrane in a molecular form and not in atomic form". This change also excludes metal membranes from being relevant as prior art for the subject matter of claim 1. It is well known to one skilled in the art that hydrogen can diffuse through metal membranes only in the form of nitrites and not in molecular form.

Claim 8 has been rewritten in independent form to include the features and limitations of amended claim 1 and to also recite that the hydrogen-containing mixture contains CO, CO_2, and N_2 as well as H_2, and wherein the hydrogen-enriched fuel contains reduced amounts of CO, CO_2, and N_2 in comparison to respective amounts in the hydrogen-containing mixture.

Claim 11 was amended also to include the limitations of amended claim 1.

Claim 2 was amended to clarify that the plastic membrane consists of a plastic material. The cited reference to Baker et al only shows composite membranes consisting of plastic and metallic layers. It is not a membrane that can be passed by hydrogen in a molecular manner.

Finally, new dependent claim 13 was added, which defines that the partial stream of claim 11 originates from the anode of the fuel cell (as disclosed on page 11 of the specification).

The Applicants respectfully submit that amended claims 1, 8, and 11, as well as their respective claims, are patentable over the cited references, since none of the references disclose all of the features of the independent claims.

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. ***Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.***, 221 USPQ 481, 485 (Fed. Cir. 1984).

For the reasons set forth above, the Applicants respectfully submit that 1-13 are patentable over the cited art. The Applicants further request withdrawal of the rejections and reconsideration of the claims as herein amended.

In light of the foregoing amendments and arguments in support of patentability, the Applicants respectfully submit that this application stands in condition for allowance. Action to this end is courteously solicited.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,

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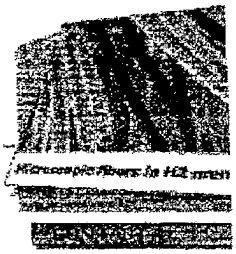
Recover and recycle of hydrogen (H2) in ammonia synthesis loops.



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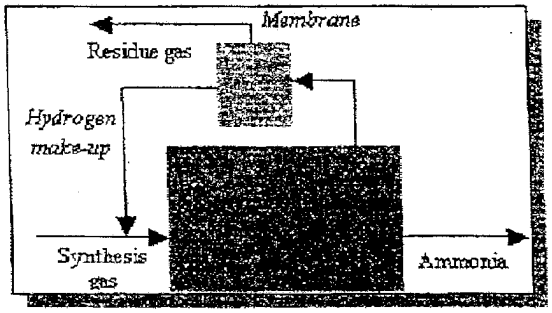

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Appendix A